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ABSTRACT

The physical environment is considered to be vitally linked to the success of the educational program, and that which requires a minimum of body energy for adaptation and thereby releases a maximum amount of energy for purposeful living is considered the best educational environment. Planning of educational facilities is discussed within this context. Each existing school building is evaluated in terms of educational adequacy, which involves judgment of site, safety, room capacity, room relationships, room characteristics, and general overall environment. A few of the more important regulations and standards upon which the evaluation is based are presented. Consideration is also given to curricular trends that influence facilities. Suggestions and recommendations are made for new facilities. (FS)

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SCHOOL FACILITIES SURVEY

for

UNIFIED SCHOOL DISTRICT NO. 353

SUMNER COUNTY

WELLINGTON, KANSAS

1966

EF 002 863

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PREFACE

The American Association of School Administrators in one of its recent publications referred to the task of school planning as follows:

IF . . . . .

"the educational program never changed;
the culture were static and scientists had ceased
probing into the unknown;
inventors had gone on a long holiday and discoveries
and innovations were at a standstill;
population mobility had ceased and the birth rate
had become a constant factor;
community life always remained the same;
towns and cities were all alike;
there were no differences in school site;
no new jobs were being created;
no new educational needs were emerging and the
specific purposes of the school were rigidly defined;
the researchers had concluded that all the answers to
the problems of teaching and learning had been found;
there were no more content to be added to the curriculum;
the producers of instructional materials and equipment
had ceased to experiment and had settled down to
producing a standard product;
people were entirely content with present accomplishments;
the dynamic forces of society had all been securely
grounded and had ceased to function;

THEN . . . . .

school-building planning would be a simple matter.
stock plans and standard classrooms would be the answer
to the school district's needs for building space.

BUT . . . . .

such is not the case, nor is it likely to be. Ours is a vigorous, restless, fermenting, dynamic society characterized by a soaring population, a rising standard of living, multiplication of material comforts, an increasing life span, new job opportunities, changing educational expectations, shrinking distances, and rapid communication. It is against this background of changing culture that administrators, teachers, school board members, local citizen groups, architects, and school-plant consultants must plan school buildings. And the tremendous difficulty of this task cannot be fully comprehended until one realizes that a building planned now must not only meet the needs of his children but that it must serve his grandchildren and his great grandchildren."

Unified School District No. 353, Sumner County, Wellington, Kansas, is faced with a need for providing additional school facilities in order to serve more adequately the student population in their district.

As a result of this need, Superintendent Waln and the Board of Education asked the School Facilities Section, State Department of Public Instruction, Topeka, Kansas to evaluate all of the existing school facilities in the district, and to make recommendations for new facilities which should be planned, designed, and constructed.

G. W. Reida, Director, School Facilities Services, State Department of Public Instruction spent two days, August 15 and 16, 1966, visiting and evaluating all of the school facilities in Unified School District No. 353. An oral report was made Tuesday evening, August 16, for the Board of Education, administration, and committee members.

In addition to the above, I spent Friday, October 14, 1966, in Unified School District No. 353. The purpose of this visitation was two-fold. First, to observe and evaluate each school building during actual school hours, and second, to determine how functional the facilities are in terms of actual usage.

It is being called to the attention of the administration, board, and community that this report does not constitute a comprehensive school survey but only a School Facilities Survey.

The report consists of 8 parts as follows:

1. Preface
2. Introduction - Planning Educational Environment
3. Standards for Evalution of Existing Facilities
4. Evaluation of Existing School Facilities
5. Curricular Trends that Influence Facilities
6. Suggestions and Recommendations
7. Conclusion
8. Appendix

INTRODUCTION

"An invincible nation is a nation of invincible people, united -- for life, liberty and the pursuit of happiness. What people? All the people? Yes, but each. We unite for the good of the person. In our nation the most important number is '1' - the single individual.

It is the individual that counts. The growth and strength of our nation depends upon how effectively we can produce strong individuals. We do this through education. This leads us very quickly to a second conclusion. The most important word in America is 'education.' So we have '1' for the number, 'education' for the word.

But what is education? Many things. But for one thing, it is a process, sometimes continuous, sometimes continual, but never ending. The path of educational experience is like a volute - ever expanding - the symbol of growth and development." .... William Wayne Caudill.

A dramatic change is taking place in education. Today, the rapidly changing world of technology is placing an even greater demand upon education. Each succeeding year brings with it greater responsibility for more learning at a greatly increased rate. With the need for a <u>better</u> and <u>more</u> intensive education, our school districts need better and more <u>efficient facilities</u> for the students and teachers in which to work and study.

There seems to be a great deal of valid information pointing to the fact that children respond better in classrooms having good environmental features. Some psychologists believe the students' entire behavioral pattern depends upon his reaction to the environment in which he is placed. Thus, the introduction explains in brief some of the environmental factors which should be considered in planning and constructing new school buildings.

Planning Educational Environment

In the past architects frequently designed a rather, symmetrical interior for a school building and then cut it up into classrooms. Very little thought was given to the function of the building or the physical and psychological impact of the building upon its occupants. Schools had monumental exteriors and monastically austere interiors. When painted at all, they received colors which would not show the dirt.

Architects are now drawing upon many resources for the planning of buildings today. Months of study with the school officials, staff and citizens committees precede the actual drawing process. Each building is a custom job and must be designed only after a tentative school program is developed based on the local community philosophy and needs. Space is allotted for each type of educational activity and service. Then the proper relationship of these areas one to another is determined so the building can be functional. Thus the floor plans emerge. Finally, a wrapper is put on the building so that it will fit into its surroundings. Its beauty will express its function and balance will be obtained through an artistic combining of mass, materials, and color. This is called planning a school building "from the inside out."

The planning job, however, is not as simple as the previous statements might indicate and very definite principles must be applied.

We must realize first that the whole child goes to school. He goes to school as a total functioning organism, socially, emotionally, physically and mentally. All of these facets of the child are interdependent and intercorrelated. It is quite impossible to be happy just in the mind. This happiness is reflected throughout the human organism and, in fact, may be caused by some pleasurable sensation or some social acceptance, or may be caused by some purely imaginary experience. Emotions permeate the whole body and condition the activity of every portion of the body. People can become blind with anger and

even paralyzed by fear. So we find that human beings act as total functioning organisms and their acts conditioned by a great number of factors such as what they eat, what they wear, the environment they are in, social contacts and general physical and mental health.

School facility planning involves the planning of that part of the educational environment developed and/or utilized under the direction of the duly elected or appointed school officials. There are three important aspects to this educational environment; the physical impact of the environment upon the human being, the psychological impact of the environment, and the educational arrangement of the environment. They are definitely iterrelated and very difficult if not impossible to completely isolate. However, an attempt is made here to treat them separately in order to simplify the problem as much as possible.

The physical impact is probably the most important and definitely has been given attention longer than any other aspect. Beyond a more or less refined stage of protection from the elements, the physical impact has been given little attention primarily because the human being has been thought of as being very adaptable to this environment. In fact, a living organism has had only three choices down through the ages; it must adapt to its environment, change its environment (or move to another environment), or die. Man has survived for so many centuries because he has been very adaptable and also ingenious enough to make changes in his environment. Adaptation is always energy consuming. The more body energy consumed in adaptation, the less body energy left for making changes or purposeful living. Fortunately man has been able to adapt himself and had enough energy left over to make changes in his environment. These changes have released more energy for further changes until he now can surround himself at most any time with the thermal, visual and acoustical conditions he desires. The technical "know how" is available but unfortunately the application of this knowledge is woefully lacking.

Most of our knowledge of the world outside of our bodies is obtained through our eyes. With considerable effort of "straining" man can see under adverse or trying conditions of glare and improper lighting. Yet when he is doing this, he is using body energy which could be better used for body repair or purposeful living.

Man can also adapt himself to very poor acoustical environment. In rooms having bad sound reverberations, frequently people sit up straight, cup their hands to their ears, and "strain" to hear. Besides being annoying, this whole act requires excessive body energy just for hearing.

Man frequently has to adapt himself to his thermal environment. We may shiver to stimulate the circulation of the blood in certain parts of his body subjected to the cold. He may perspire excessively when his environment is too warm. Either of these two acts not only is distracting but requires body energy.

Even the furniture can require excessive use of body energy for adaptation. Sit in a chair too high, too low, or in some other way uncomfortable, and you will notice that certain muscles are taut; that you are making an effort to adjust to a position giving you some degree of comfort. If you persist in the use of that type of furniture, then the body makes more permanent adjustments so as to require less effort for adaptation. These more permanent adjustments become deformities.

The psychological impact of the environment upon man is more difficult to analyze. This is due to the fact that the emotional status of the individual has much to do with this psychological impact. This emotional status can change rapidly because of ideas, fancies, rejections, words, tones, body chemistry and many other things too numerous to mention here. These are things that the school building planner cannot control, so he must be content with the things he can control. Color is definitely a part of the psychological environment.

Color as well as the total environment can be considered stimulating, relaxing, neutral, or depressing. We are not interested in designing a depressing environment, but we should be interested in the other three. Without a doubt, adjustment of an emotional or psychological nature also requires excessive body energy.

We see that adjustment to both the physical and psychological aspects of our environment normally require considerable bodily energy. Studies have been made which tend to show that the use of body energy for adaptation in what is usually considered a good classroom actually deprived human bodies of the requisite amount of energy needed for body repair. Further research may prove even astounding however logical. Regardless of the degree of body depletion accepted as a fact by the reader, it easily demonstrated (a) that adaptation of one's environment requires body energy, and (b) that energy might better be used for purposeful living, in a vocation, for recreation or for study. Let it not be said that the author advocates an environment requiring no human adaptation. Some adaptation, adjustment or accommodation is desirable to keep the body adaptable; however, this does not have to be in the schoolhouse. Generally speaking, it can be said that the environment which requires a minimum of body energy for more adaptation and thereby releases a maximum amount of energy for purposeful living is the best educational environment. The proper planning of any educational facility must perforce use this principle.

The need for the educational arrangement or the functional planning of the school plant is now an established fact. Various types of activities and school programs require various sizes and types of space. There is no such thing as a standard classroom today. Classrooms--commonly thought of as educational areas with a ceiling, a floor and surrounded with walls--must of necessity vary in size. They must be planned for specific uses and, at the same time, be designed to be adaptable to other uses if need be. These areas not only must vary in size but also must vary in relationship one to another, due to the particular

needs of the community and the resultant effects on the school program. One school may require a cafeteria while another may not. One school may become the center of community recreation while another need not. One community may require agriculture with an extensive evening program while another is more urban. So good school facility planning will take into account all the local needs and yet provide flexibility.

Modern school facility planning must give consideration to the following aspects:

(a) The whole child goes to school. He goes to school socially, emotionally, physically and mentally.

(b) The environment must require an expenditure of a minimum of bodily energy for mere adaptation.

(c) The educational spaces must be functional both in size and in relation one to another, yet be adaptable to change.

STANDARDS
for
EVALUATION OF EXISTING SCHOOL FACILITIES

In making judgments related to the future needs of a school district, existing facilities of the district must be evaluated in terms of their site adequacy, location adequacy, educational adequacy, and structural adequacy. In determining the effectiveness of a particular school building, structural soundness is often the only criterion applied. Except in the cases of a fire, a flood, or an earthquake, school buildings seldom become structurally unsuited for attendance. If evaluated in terms of site adequacy, location adequacy, and educational adequacy, many school buildings fall short and perhaps should have been abandoned or rehabilitated years ago. "Most school buildings become obsolete long before the structures themselves deteriorate."[1] Educational adequacy, site adequacy, and location adequacy should take precedence over structural adequacy when considering the rehabilitation or abandonment of a school building.

The plan of evaluation for Unified School District No. 353, Sumner County, Wellington, Kansas called for each school building to be visited and evaluated. The standards used in the evaluation are primarily based upon recommended standards as determined by the National Council on Schoolhouse Construction.[2] The local school district's philosophy and desires may cause these standards to be modified, but the standards do provide a basis for the evaluations that were made and are defined in the format that follows:

I. SITE

A. Site Size: Site size is influenced by the number of students and the educational program that is offered in a school. The site

[1]Benjamin Handler. "Economic Planning for Better Schools." Ann Arbor: Publications Distribution Service, University of Michigan.

[2]National Council on Schoolhouse Construction. NCSC Guide for Planning School Plants, 1964 Edition.

sizes recommended by the National Council on Schoolhouse Construction, 1964 edition, are:

1. Elementary schools: A minimum of 10 acres plus an additional acre for each 100 pupils enrolled.
2. Junior high schools: A minimum of 20 acres plus an additional acre for each 100 pupils enrolled.
3. Senior high schools: A minimum of 30 acres plus an additional acre for each 100 pupils enrolled.

B. General Playground Area: Outdoor instructional areas for elementary children should include space and facilities suited to the children's particular developmental needs, interests, and abilities. Outdoor facilities for the primary children may include sandboxes, informal and low organized games, and appropriate physical development apparatus, such as climbing structures. Upper elementary children require an activity area larger than that provided for primary children.

C. Hard-surfaced Area: It is desirable that every playground have a sizeable hard-surfaced area (of no less than 3500 square feet) for use during inclement weather and for pupil activities. This area should be connected to sidewalks and should have some provision for sheltering the pupils from the weather.

D. Landscaping: Attractive school grounds enhance opportunities for general cultural development and tend to create pride in both the school and community. Generally, school grounds should be landscaped in an informal manner with plants which are indigenous to the locality.

E. Incinerator: It is recommended that provisions be made for incinerators in the building when planning a building. If outdoor incinerators

are used, they should be located away from playground areas and buildings and should be enclosed by a fence. The area surrounding the incinerator should be kept free of debris.

F. Parking: Parking space on school grounds should be provided for school employees who travel by automobile, for pupils permitted to drive, for visitors, and for school buses which are not used during the day but which remain at the school. In some localities, the parking area should be hard-surfaced. Traffic and stall lanes should be marked to guide drivers. Because of special hazards involving groups of children of varying ages, approaches to the parking spaces and roads therein, should be laid out to minimize dangers. Appropriate bicycle storage should be maintained apart from the automobile parking area.

II. LOCATION

A. School Population: Educational facilities should be located near the center of the attendance area they are to serve. The site should be appropriately located within the pattern of existing and future school facilities.

B. Zoning: School sites should not be located where zoning permits construction of unsightly factories, congested business centers, and/or railroads. These conditions will not only deteriorate the attractive appearance of a school but also will create a poor environment for an educational facility.

C. Traffic: Approaches to school grounds should not require pupils to cross main traffic arteries, railroad rights-of-way, or heavy business or industrial traffic. Adequate space for safely loading and unloading pupils transported by buses should be provided on the school site. School buses should enter loading spaces from side

streets and should not be routed across frequently traveled pedestrian paths. The site should be accessible from feeder streets and roads to simplify safety procedures for loading and unloading transported pupils.

D. Transportation: The following one-way travel times on conveyances are considered reasonable maximums for transported pupils: (1) one-half hour for elementary school pupils and (2) one hour for secondary school pupils. In more sparsely populated areas, greater traveling times are considered reasonable.

E. Expansion: Many school districts lack foresight in selecting adequate sites. Purchasing sites large enough for expansion will save the district money in the long run when expansion becomes necessary.

F. Drainage and Topography: A site should not be located in a flood plain or in an area subject to serious crosswashing due to seasonal deluges. School sites should have an adequate drainage system. Geological and topographical hazards, such as rivers, swamps, wooded areas, land faults, poor contour, and/or poor subsurface conditions should not be on or near a school site.

III. EDUCATIONAL

A. General Classrooms:

1. Size: Elementary classrooms should contain a minimum of 30 square feet per pupil and the desirable maximum number of pupils per room should not exceed 30. Kindergarten rooms should contain 50 square feet per pupil, and the desirable maximum number of pupils per room should not exceed 25. Senior high school general classrooms should contain at least 25 square feet per pupil, and a maximum number of 25 students per room. Junior high school general classrooms should contain at least 28 square feet per pupil and a maximum number of 28 students per room.

2. Visual Environment: This includes the investigation of artificial lighting and natural lighting. Regardless of the type of lighting used, artificial or natural, glares should be avoided, and the light should be evenly distributed throughout the room. Window shades that are adequate to prevent glare from sunlight should be provided in each room.
3. Acoustical Environment: This refers to the overall noise level of the rooms. Provisions should be made in each room, through ceiling tile, acoustical ceilings, and/or acoustical floor covering to minimize noise and distractions. Room echoes are not desirable. Floors, walls, ceilings, and partitions should be adequate to reduce the noise level for promoting a good teaching-learning atmosphere. Student concentration should be possible.
4. Work Environment: Furniture and equipment should be adequate for the age level using the room and should meet the requirements of the activities taking place. Adequate closed storage for supplies and teaching aids should be located in each room. Attractiveness and pleasantness should be promoted by the design and interior decoration of the room. A double electrical outlet should be appropriately located in each wall.

B. Laboratories: This refers to teaching stations designed especially for art, business education, home economics, industrial arts, music physical education, and science. These rooms are not interchangeable and are only for the activities for which they were designed. Laboratories should fulfill the same visual and acoustical environment requirements as the general classrooms. Size requirements for laboratories are as follows:

1. Art: 35 square feet per pupil, exclusive of storage.

2. Business Education: 30 square feet per pupil including storage.

3. Home Economics: 50 square feet per pupil, including storage.

4. Industrial Arts: 75 square feet per pupil, excluding storage.

5. Music: Vocal - 16 square feet per pupil, exclusive of storage.

6. Music: Instrumental - 20 square feet per pupil, exclusive of storage.

7. Physical Education: 200 square feet per pupil, exclusive of storage, for secondary. A room with dimensions of 50' x 70', exclusive of storage, for elementary.

8. Science: 40 square feet per pupil, excluding storage. Minimum storage space in a science laboratory is 150 square feet.

Furniture, equipment, and storage should be designed for the activities which are to be carried on in the laboratories. Color schemes and general housekeeping within a laboratory should create an attractive and pleasant environment.

C. Central Facilities: This refers to administration facilities, cafeteria, health rooms, libraries, and teachers' rooms.

1. Administration: Flexibility is highly essential in the administration offices. Easily removed interior partitions should be used for administration offices. The flexible partitions should not sacrifice acoustical efficiency, privacy, or attractiveness. Adequate lighting and ventilation, and special wiring for phones and electrical service outlets are requirements for a desirable facility. The administration offices should feature hospitality through pleasant and attractive designs and should be easily accessible by pupils, teachers, parents, and the public. The offices should also have a pleasant reception area. Storage for school supplies and

office equipment should be adequate. Fireproof storage should be provided for school records.

2. Cafeteria: Cafeteria facilities should be provided for the hot lunch program in each school, or an adequate area should be provided when food is brought from a centralized food preparation center. Ventilation, independent of the rest of the building, should be provided. Special exhaust fans should be located over cooking units.

3. Health Room: Provision should be made for an area large enough for more than one bed and should contain restroom facilities. This area should be located for ease of supervision. Accommodations should be made for privacy when the room is occupied by two or more pupils.

4. Instructional Materials Center (Library): The library is the center for the instructional program in the modern school. Its functions have multiplied in recent years to include the housing of all types of learning materials and equipment for pupils and teachers. The library is now a station for the simple tools of research as well as for the more traditional library functions. Included in the instructional materials center are such materials as books, magazines, pamphlets, pictures, filmstrips, slides, recordings, and tapes. Also included is such equipment as many types of projectors, discs and tape recorders, portable television, and radio sets. Because an instructional materials center unifies all functions relating to instructional materials, it is also the logical area around which certain learning activities should be organized. These activities should include library instruction, individual and group research and study,

reading and browsing, small-group conferences, auditioning, and viewing of many kinds of audio-visual materials. The instructional materials center should be organized to provide students and instructors with library materials and services as the need arises. Because of the numerous purposes the instructional materials center is to serve, it should be located centrally for the efficient distribution of equipment and materials and for convenient use by teachers and students. Features of the center should be flexible. The arrangement of the center should provide for isolation of the noise-producing areas, such as classrooms and reading areas. Within the center, reading and study areas should be provided for both individual and group use. Individual study cubicles providing secluded study opportunities are desirable in secondary schools. Adequate storage for materials and equipment should be provided.

5. Teachers' Room: This facility should contain adequate storage for supplies and teaching aids, duplicating machines and materials, a professional library, restroom facilities, and an adequate amount of work space in a pleasant and attractive atmosphere.

IV. STRUCTURAL

A. Fire and Safety: The facilities should have adequate fireproof fire escapes; procedures for building evacuation; fire extinguishers; alarm systems; safe stairs and floors; proper location of incinerators; proper storage for combustible materials; safe equipment; and safe, adequate traffic flow.

B. Water and Sanitation: This refers to the source and purity of drinking water, the adequacy of sewage and garbage disposal, the

condition of drinking fountains and restrooms, and the general cleanliness of the buildings and grounds. Restroom fixtures should be related to the maturity and size of pupils served. Mechanical exhaust ventilation with ducts separated from other rooms is necessary to provide adequate ventilation and to minimize the accumulation of odors in all restrooms.

C. Structural: This has reference to the foundation, walls, roof, and other basic components of the structure - i.e., brickwork, joints, wood, and steelwork. The evaluation team members are not structural engineers and recorded only noticeable defects in structure. Any defects noted in this report should be inspected by a competent structural engineer.

D. Thermal Environment: The building should be heated so that there are no undesirable "hot" and "cold" areas. Heat should be controlled from individual rooms. Rooms should be ventilated adequately. Room temperatures should be constant.

E. Maintenance: The facility should be clean and well-maintained. Adequate storage should be provided for custodial supplies. A work shop should be provided for the maintenance staff.

V. PORTABLE CLASSROOM UNITS

There are as many variations on the subject of portable or relocatable classrooms as could be devised through the ingenuity of local officials and, at times, the paralleled efforts of architects and industry. The variety of approaches and purposes is only partially expressed in a review of the descriptive names attached to these classroom units or buildings.

Transportable	Instant Schools
Portable	Add-a-Class
Mobile	Temporary
Movable	Emergency
Relocatable	Classrooms-on-Wheels

Unit Classrooms
Semi-Permanent
Prefabricated
Factory Planned
Factory Built
Redeployable
Demountable

Studio Classrooms
Cottage Classrooms
Bungalow Classrooms
Shared Tenancy Structures
Convertible Schools
Primary Unit Schools

The majority of these structures are physically relocatable by one method or another. Several, such as the primary unit schools, convertible schools, and shared tenancy structures, suggest that the body of students be moved from one building to another, rather than relocating the structure itself.

Many communities have used relocatable classrooms as an answer to the need for growth and for rapid adjustments in school housing to meet population changes. The most serious criticism of these units (aside from the fact that often they lack design quality and appropriateness) has been their physical isolation from the main stream of activity in the parent school and their isolation from each other. Often this isolation limits the amount of space and facilities provided for students and teachers in these self-contained schoolhouses to the single classroom.

The majority of school officials report that their relocatable classroom units do not approach the functional, cost or aesthetic qualities established for regular classrooms. The practice of designing building-moving and mobile units is obviously in a stumbling stage of infancy. Costs are generally higher than were anticipated by the district. Appearance and space have usually been sacrificed in attempting to meet a low cost classroom unit. As a result of a non-functional and poorly planned educational classroom, many children fail to achieve their maximum capabilities.

In the absence of separate "Codes, Standards and Specifications," for portable classrooms in Kansas, it is assumed that they shall meet the same requirements as established for permanent classrooms.

EVALUATION OF EXISTING SCHOOL FACILITIES

As stated earlier in this report, each existing building is being evaluated in terms of educational adequacy. This educational adequacy involved judgment of site, safety, room capacity, room relationships, room characteristics, (such as artificial lighting, acoustical ceilings, floor coverings, decorations, heating ventilation, etc.) and general overall environment. A few of the more important regulations and standards are printed in this report on pages 7 to 16 inclusive. These standards are in keeping with the Rules, Regulations, Standards and Procedures for Accrediting Elementary and Secondary Schools as developed by the Kansas State Department of Public Instruction and those established by the National Council on Schoolhouse Construction.

It must be emphasized that the "tone" of a school facilities appraisal tends to be somewhat critical. This is the nature of any true study that attempts to objectively evaluate school facilities. No person, group of persons, or community should interpret these comments as a condemnation of the board of education, past or present, administration, or community in their efforts to provide good educational facilities for the boys and girls in Unified School District No. 353. Rather, the findings and recommendations must be recognized as the basis for determining present and future school building needs in the newly unified school district.

Administration Area

1. The board of education and administration are being commended for having secured the old Post Office Building in Wellington and remodeling the structure into a comfortable and seemingly adequate administrative suite.

   a. The building is well located.

   b. It appears that most of the offices have a pleasant environment.

   c. The floor coverings are good.

   d. The acoustical ceilings are good.

   e. Heat, ventilation and temperature controlsare good.

   f. The artificial lighting is good.

   g. The general location of the various offices appears functional.

   h. The waiting area appears small and somewhat limited. Perhaps at a later date this can be enlarged if need actually arises.

   i. The central warehouse in the basement appears well arranged and adequate for the present.

   j. The board room is well located and appears functional.

2. The old Wellington Post Office Building had a very small site. This, of course, is a limiting factor for the new unified school district administrative building. It is being recognized that probably very little can be done to correct this deficiency at this time.

   a. Due to the small site only a very few cars can actually be parked on the grounds. This may create some problem.

   b. Perhaps the board of education could arrange with the City of Wellington to reserve a few street parking spaces on both the west and south sides of the building. The district might even pay the city to rent these spaces if necessary.

   c. It is being suggested that as any lots or properties adjacent to the administrative building are placed on the market, the school district should purchase them and enlarge the site.

      (1) The board should take necessary action to assure the district first chance to purchase such properties.

Roosevelt Elementary School

1. Date of construction: 1954

2. Rated capacity: 240

   a. Size of classrooms: 30' x 30'. Building has
      6 regular classrooms, and
      1 kindergarten room

3. Present enrollment: 152

4. Site: Only one city block - approximately 2.2 acres

5. Standard site: 12 acres

6. General comments:

   a. Building constructed of fire-resistant materials.

   b. The building is clean and well maintained.

   c. Classroom size 30' x 30' - very good.

   d. Light fixtures need shields to properly diffuse the light and to avoid direct glare.

   e. No provision to control the natural light coming into the building through the sky-domes.

   f. Good multi-purpose room and stage.

   g. The building has good related areas as follows:

      (1) office, (2) teachers' workroom, and (3) health room.

   h. The building does not have the following:

      (1) central library, (2) separate music room, or
      (3) lunchroom

   i. Rules, Regulations, Standards and Procedures for Accrediting Elementary Schools states: "Each elementary school shall have a well-balanced collection of books, basic reference material, and periodicals appropriate to the objectives of the school and needs of the pupil. This collection shall provide reading material in all subject areas of the school curriculum. It shall contain factual books as well as fiction. (See A Curriculum Guide for the Elementary Schools of Kansas, section on "The Library" for a more detailed description.)"

Madison Elementary School

1. Date of construction: 1907

2. Building in continuous use for 59 years

3. Rated capacity: 194

   a. Size of classrooms 24' x 30'. School has only
   4 regular classrooms, plus portable space for
   4 regular classrooms, and
   1 kindergarten room.

4. Present enrollment: 203

5. Site: only one city block - approximately 2.1 acres

6. Standard site: 12 acres

7. General comments:

   a. Basement rooms are being utilized as follows:

   (1) fourth grade room, (2) audio-visual room, (3) music room, (4) teachers' room, and (5) health room.

   (1) According to State Rules, Regulations, Standards and Procedures for Accrediting Elementary Schools, "Basement rooms used for classrooms are acceptable for accreditation purposes on a temporary basis only."

   b. Rooms need improved artificial lighting and light control.

   c. Building does not have a multi-purpose room.

   d. Need on-site parking.

   e. The Madison school has three portable buildings, housing
   4 regular classrooms and
   1 kindergarten room.

   (1) Portable classrooms tend to make it difficult to properly coordinate the school program. Thus, they should be replaced as soon as possible.

   f. The wooden floors and stairways in the building are creaky and noisy.

   g. The principal's office is inadequate and poorly located.

   h. No central library or lunchroom.

Lincoln Elementary School

1. Date of construction: 1954

2. Rated capacity: 218

   a. Size of classrooms 24' x 30', plus wardrobe area
   The Lincoln building has
   7 regular classrooms,
   1 kindergarten room,
   1 makeshift classroom - converted from health room.

3. Present enrollment: 190

4. Site: only one city block - approximately 2.2 acres

5. Standard site: 12 acres

6. General comments:

   a. Building constructed of fire-resistant materials.
   Fire exits properly marked.

   b. Building is clean and well maintained.

   c. Classroom size 24' x 30'.

   d. The building has good related areas as follows:

   (1) office, (2) teachers' work area, (3) good multi-purpose room, with a fine lobby, (4) public restrooms adjacent to all-purpose room, and (5) one ungraded classroom.

e. The health room has been temporarily converted to a classroom. This should be corrected as soon as possible. Currently, the health room is housed in the teachers' lounge.

f. The building does not have a central library, or lunch facilities.

g. Building well decorated.

h. Need on-site parking.

   (1) Three groups need parking space near the school:
   Teachers, pupils, and other school employees who regularly drive;
   Parents, school visitors, and salesmen;
   Large spectator groups attending school or public activities.

Jefferson Elementary School

1. Date of construction: 1916

2. Building in continuous use for 50 years

3. Rated capacity: 194

   a. Size of classrooms 24' x 30' - the school has
      6 regular classrooms, and
      1 kindergarten room.

4. Present enrollment: 165

5. Site: only one city block - approximately 2.2 acres

6. Standard site: 12 acres

7. General comments:

   a. Basement rooms are being utilized as follows:
      (1) kindergarten room, (2) first grade room, and
      (3) a P.T.A. room.

   b. All classrooms need better artificial lighting.

   c. The building has several tie-rods to help hold it in position.

   d. The multi-purpose room is rather small and located in the basement area.

   e. Most of the ceilings have been replaced with acoustical ceilings.

   f. The building does not have the following:
      (1) central library, (2) adequate office space,
      (3) adequate health room, or (4) a proper teacher work area.

   g. Need a good music room and lunch facilities.

   h. Building well maintained and decorated.

   i. Need on-site parking.

   j. This building is deficient in many areas despite the fact that an attempt has been made over the years to keep the building in good repair. It is our suggestion and recommendation that the board of education in setting up a Master Plan for School Buildings, plan to phase out the Jefferson school.

McKinley Elementary School

1. Date of construction: 1908

2. Building in continuous use for 58 years

3. Rated capacity: 290

   a. Size of classrooms 24' x 30'. The school has only 4 regular classrooms in main building, plus portable space for 6 regular classrooms, and 1 kindergarten room.

4. Present enrollment: 308

5. Site: Less than one city block - approximately 1.7 acres.

6. Standard site: 13 acres

7. General comments:

   a. Basement spaces are being used for the following: (1) two regular classrooms - both 4th grade, (2) one audio-visual room, and (3) one music and art room.

   b. Basement rooms can be utilized only on a temporary basis for accreditation purposes. They are usually undesirable from the standpoint of (1) ventilation, (2) heat, (3) light, (4) humidity, and (5) health.

   c. Building does not have adequate facilities for the following: (1) multi-purpose room, (2) central library, (3) lunch facilities, and (4) office.

   d. The seven portable classrooms make it difficult to properly coordinate the curriculum and school program.

   e. The classrooms need better artificial lighting.

   f. The site is much too small.

   g. Some of the ceilings in the portable rooms are too low.

   h. Building has several tie-rods through the center to hold it in place.

   i. The building is in generally good condition but has outlived its usefulness as a school facility.

   j. Need on-site parking.

   k. Wooden floors are creaky and noisy.

   l. The McKinley elementary school facilities should be replaced with a functional building just as soon as possible.

Washington Elementary School

1. Date of construction: 1928 - an addition in 1950

2. Rated capacity: 218

   a. Size of classrooms about 24' x 30' - building has
      6 regular classrooms,
      1 special education room, and
      1 kindergarten room.

3. Present enrollment: 173

4. Site: Less than one city block - approximately 1.9 acres

5. Standard site size: 12 acres

6. General comments:

   a. Most of the classrooms need new artificial lighting.

   b. Several of the classrooms and some of the corridor area need new acoustical ceilings.

   c. Building has very little storage area, especially for the custodian.

   d. The office area is very small in size.

   e. Teachers' workroom is too small.

   f. The school does not have a multi-purpose room.

   g. School does not have a (1) central library, (2) lunch facilities, or (3) music room.

   h. The building needs a good health room.

   i. The school site is very small.

   j. All schools need on-site parking and space to load and unload school buses.

7. Since the building already houses one special education class, it might be logical for the school district authorities to plan to eventually remodel this building to house all special education classes, the federal programs and other special classes as needed.

   a. If this suggestion is followed, it might be well to fence the school grounds as a measure of safety for the school children.

Mayfield Elementary School

1. Date of construction: 1924 - the metal gymnasium was constructed about the year 1954.

2. Rated capacity: 80

   a. Size of classrooms is about 600 square feet per room.
   The school has a total of
   4 regular classrooms,
   1 cafeteria in basement, and
   1 metal gymnasium located north of the main structure.

3. Present enrollment: 78

4. Site: One city block or approximately 2 acres

5. Standard site size: 5 acres

6. General comments:

   a. The wooden floors and stairways are creaky and noisy.

   b. The classrooms need improved lighting and light control.

   c. The principal's office is very inadequate and is poorly located.

   d. The building does not have a central library, or an adequate faculty workroom.

   e. Classrooms are lacking sufficient teacher storage.

   f. Restrooms are poorly ventilated.

   g. Outside play area is very limited.

   h. The building in general has received fair maintenance, but has outlived its usefulness as a school facility.

   i. It might be educationally more functional to transport the 7th and 8th grade pupils, as well as kindergarten, to Wellington.

Rome Elementary School

1. Date of construction: Original room 1924 - the second classroom constructed at a later date following the consolidation of some one-teacher school districts.

2. Rated capacity: 40

   a. Size of classrooms about 720 square feet. School has only
      2 regular classrooms, and
      1 cafeteria in basement.

3. Present enrollment: 32

4. Site: 2 acres

5. Standard site size: 5 acres

6. General comments:

   a. The building is adequate in most respects and generally well-maintained.

   b. Perhaps it would be educationally more functional to transport the 7th and 8th grade students, as well as the kindergarten children, to Wellington and retain only grades 1 through 6, thus placing grades 1 through 3 in one room, and grades 4 through 6 in the other room.

   c. Appear to have a satisfactory school lunch program.

   d. The small stage at the east end of the primary room serves a definite purpose, but it also presents some limiting factors in the daily routine of teaching.

Wellington Junior High School

1. Date of construction: 1927

2. Rated capacity: 700

3. Present enrollment: 556

4. Site: approximately 10 or 12 acres (estimated)

5. Standard site size: 26 acres

6. General comments:

   a. Generally the building appears to be structurally sound.

   b. All of the classrooms should have good acoustical ceilings.

   c. State and national standards for a junior high school classroom are 28 square feet of floor space per pupil.

      (1) Wellington junior high school building has at least 6 rooms which are only 21' x 24' - thus these rooms should properly house only 18 students.

      (2) At least two rooms are only 24' x 25', thus these rooms should only house about 21 or 22 pupils.

   d. All of the classrooms in the entire building need relighting to meet the state and national standards.

   e. All of the mathematics rooms need more chalkboard.

   f. The vocal music room needs drapes for the windows.

   g. The remedial reading room needs better lighting and more shelving.

   h. The junior high school building should have an instrumental music room rather than to have the students go to the senior high school for their instrumental instruction.

   i. The fire codes have been fulfilled by building enclosed stairwells.

   j. A need exists for a school lunch program for the junior high school students.

7. The Wellington junior high school has a total of
   27 classrooms
   1 library
   1 nurse's office
   1 gymnasium
   1 auditorium
   1 shop in basement (sufficient for two teaching stations)

The rooms are numbered and assigned as follows:

First Floor Junior High

Room 101 - Nurse
102 - Geography and History (size 21' x 24')
103 - Language Arts
104 - Health (size 21' x 24')
105 - Mathematics (size 21' x 24')
106 - English
107 - Special Education (size 21' x 24')
108 - Arts and Crafts (needs better equipment)
109-110 - Homemaking
111 - Physical Education Office

Second Floor

201 - Library (needs better lighting)
202 - Language Arts (21' x 24')
203 - Guidance
204 - Administrative Office
205 - Citizenship
206 - Commerce (size 21' x 24')
207 - Typing
208 - English and Citizenship (size 24' x 25')
209 - English
210 - Algebra and Mathematics (only 17 lineal feet of chalkboard)
212 - Spanish and Latin (needs better acoustics)
213 - Lounge

Third Floor

302 - Vocal Music (windows should have drapes)
303 - Remedial Reading (needs better lights and shelving)
304 - Mathematics (needs better lights and more chalkboard space)
305 - Science Lab and Lecture
306 - Science (lecture)
307 - Biology (lecture)
308 - Mathematics (size 24' x 25')
309 - History
310 - English
312 - English
313 - Storage

Note: Room 211 on the second floor and 311 on the third floor are not listed. The partitions have been removed and Room 211 is now a part of Room 210, and Room 311 is now a part of Room 310.

8. This building constructed of fire resistant materials appears to be structurally sound. The building should probably continue to be used as a junior high school facility for many years. Thus, it is our suggestion and recommendation that money be provided in the next bond proposal to properly take care of all the deficiencies in this structure.

Wellington Senior High School

1. Date of construction: 1961

2. Rated Capacity: 500

3. Present enrollment: 581

4. Site: approximately 20 acres (estimated)

5. Standard site size: 40 acres

6. General comments:

   a. In general, the building is structurally sound and in very good repair.

   b. The student lockers are too narrow in size and there appears to be an insufficient number to adequately care for the student needs.

   c. The general shop being only some 32' x 40' in size extremely limits the offerings in this department.

   d. The industrial arts shop being only 41' x 46' is also too small.

      (1) The shop department needs a project storage space.

      (2) The paint room exhaust fan draws air from the shop area and consequently sawdust gets all over the painted furniture.

      (3) The location of the paint room underneath the classroom area poses a hazard if an explosion of any type should ever occur in the paint room.

   e. The arts and crafts room needs: (1) shielded light fixtures to eliminate glare, and (2) a display area to stimulate student interest in this field.

   f. Every comprehensive high school should have at least two music rooms, one for vocal music and one for instrumental music.

      (1) The present music room is sub-standard for a school of your size. The room is approximately 30' x 48' which equals only 1440 square feet of floor space. Applying the standards of 20 square feet of floor space for instrumental and 16 square feet for vocal music, the room should only house a maximum of 72 band students and a maximum of 90 vocal students.

      (2) The ceiling is only 11 feet and 3 inches high and the minimum standards call for a ceiling of at least 14 feet high. Thus, it is virtually impossible to have any type of risers in the music room for the students.

(3) Practice rooms need to be acoustically treated.

(4) The instrument storage area should be a walk-through room so students could enter in one door and continue out another door.

(5) Ventilation in the music room is very bad.

(6) The acoustical treatment of the music room is not adequate to bring out rich musical tones.

g. The high school should have a fully equipped language laboratory.

h. The high school facilities are overcrowded and an addition should be planned and constructed as soon as possible.

(1) Suggestions for an addition to the high school will be covered in the recommendations in this report.

i. To compensate in part for the shortage of classrooms, the high school is utilizing two makeshift portable units located adjacent to the junior high school. Neither of these portable units are acceptable for accreditation purposes.

j. Due to a lack of adequate space, the high school uses the girls' dressing room for visiting athletic teams. This is a real bad practice and needs to be corrected.

k. The health room is limited in size; accommodates only one sick bed and is not adequate in length for student eye examinations.

7. Senior high school enrollments have increased during the last few years as follows:

1961-62 -- 487
1962-63 -- 484
1963-64 -- 557
1964-65 -- 558
1965-66 -- 552
1966-67 -- 581

Thus, it is readily noted that the senior high school enrollment has increased a total of 134 in the last five years.

8. Senior high school classrooms are numbered and assigned as follows:

Room 101 - Government (has 840 square feet of floor space which is very good)
102 - Foods (excellent equipment and facilities)
103 - American History and English
104 - Small conference room
105 - English
106 - Clothing (excellent equipment and facilities)
107 - Bookkeeping (room size 28' x 38', which is very good)
108 - Chemistry and Physics (room appears adequate)

Room 109 - Typing (room size 28' x 38', which is good)
110 - Biology (room size appears adequate)
111 - Office Practice (room size only 18' x 28' - this is not adequate)
112 - Mathematics (room size adequate)
113 - Spanish and Latin (only portable electronic equipment - does not have a complete foreign language laboratory)
114 - Psychology, Economics and Government (room size adequate)
115 - Library (reading area only 28' x 54'. In addition to the reading room, there are two other small rooms, one used for periodicals and work area and the other one for guidance. The library area is not adequate in space to accommodate a student body of 600 pupils.)
116 - Mathematics (room size is adequate)
117 - English (room size 28' x 43' is excellent for debate and small dramatics groups as well as English)
118 - English (room size adequate)

Basement Rooms

No. 1 - Arts and Crafts (room size appears adequate)
2 - Industrial Arts (room size only 41' x 46', which is very limited for this type of instruction)
3 - General Shop room (room size 32' x 40'. This area is certainly very limited for the activity that should be taking place in a good general shop.)
4 - Drafting (room size appears adequate)
5 - Instrumental Music (room size only 30' x 48', which is very inadequate for a school the size of Wellington. See further explanation on page)
5v - Small Vocal Music Ensemble room (inadequate in size)

In addition to the above mentioned classrooms, there is a gymnasium adequate for two teaching stations and a seating capacity of 1440 spectators for basketball games.

a. The gymnasium facility does not have a wrestling area. Due to a lack of a wrestling area, the students use a small area at the junior high school building for this purpose. The utilization of the junior high space for this activity is not good. It necessitates the transporting of the wrestling mats from one building to the other and creates considerable confusion, not only for the high school students but for the students and faculty members in the junior high school building.

9. Unified School District No. 353, Wellington, Kansas should have at least the following facilities in order to offer a well-rounded comprehensive program:

1 Central Library (at least 5000 square feet of floor area for the reading room and related areas such as library office, workroom, conference rooms, audio-visual rooms, etc.)
5 English rooms
1 Speech and Drama room, or a Little Theater
3 Mathematics rooms

4 Social Studies rooms
2 Foreign Language rooms, one of which should have laboratory equipment
3 Science rooms
2 Music rooms (one for instrumental and one for vocal)
3 Commerce rooms
2 Home Economics rooms
1 Arts and Crafts room
1 Drafting room
1 Electronics shop
1 Metals shop
1 Power Mechanics shop
1 Graphic Arts room
1 Industrial Arts room
2 Classrooms for the shop students
1 Good Gymnasium with two teaching stations (Adjacent to the gym should be good shower and dressing facilities for both the boys and girls physical education classes. In addition, there should be adequate dressing rooms separately for the varsity team and the visiting team.)
1 Wrestling Gym
Facilities for a school lunch program

10. A summary of the above is shown below in three columns. The first column shows the number of spaces now available in the Wellington high school; column 2 shows the number of spaces that are required to adequately care for an enrollment of 600 to 700 students; column 3 shows the number of spaces that should be added.

	Spaces now available Column 1	Spaces required Column 2	Additional Spaces needed Column 3
Library	1	1	0
English	3	5	2
Speech and Drama	0	1	1
Mathematics	2	3	1
Social Studies	3	4	1
Foreign Language	1	2	1
Science	2	3	1
Music	1	2	1
Commerce	3	3	0
Arts and Crafts	1	1	0
Home Economics	2	2	0
Drafting Room	1	1	0
Electronics Shop	0	1	1
Metals Shop	1	1	0
Power Mechanics	0	1	1
Graphic Arts	0	1	1
Industrial Arts	1	1	0
Shop Classroom	0	2	2
Gymnasium	1	1	0
Wrestling Gym	0	1	1
Facilities for school lunch program	0	1	1

Room 104, which is a small conference room adjacent to the home economics suite, and Room 5v (the small ensemble room), are not shown in the table above.

CURRICULAR TRENDS THAT INFLUENCE FACILITIES

A school building is more than shelter for students and teachers as they proceed with the business of education. It is an essential teaching tool. Properly planned, the schoolhouse enhances the educational program. Improperly planned, it impedes educational progress. Although no one can legitimately argue that buildings are more important than good teachers, an abundance of research demonstrates that even good teachers cannot do their best work if they do not have proper tools.

Since the primary function of a school building is to house an educational program (indeed, a positive contribution to the teaching-learning process is its only justification for existence!), it follows logically that school buildings must be appraised with reference to their potential contributions to education. The following is not an attempt to stipulate a desired curriculum for Unified School District No. 353, Wellington, Kansas. It is, however, a discussion of trends in desirable educational programs which suggest modifications for older buildings and considerations when planning new buildings.

In all of this discussion we keep in mind two basic assumptions which we make about education in this district. These are:

1. The people of this school-community desire to provide equal educational opportunity for all boys and girls in the district (as near as efficiently possible).

2. The people of the community desire to provide education which will equip the youth to take their rightful places in society, wherever they may live -- i.e., to participate fully as citizens and to "compete on the open market" for economic opportunities. <u>If either of these assumptions is invalid, then the entire study is meaningless</u>.

If these assumptions are justified, however, then we can describe certain essential characteristics of good education -- regardless of the specific pattern

of course offerings -- which have profound implications for the planning and evaluation of buildings. Indeed, only in this context can facilities be properly appraised and future needs defined.

Elementary Education

The breaking away from the learning situation in which the teacher was a task-master and the chief virtue of the pupil was to sit still and keep quiet to a new pattern in which children are encouraged to be active, has forced the abandonment of the standard classroom with its fixed seating, dark wood finishes, and "light over the left shoulder."

The most significant difference between the earlier elementary school program and today's program is the replacement of passive learning with active learning. The elementary program reflects an emphasis on techniques and methods designed to meet the individual needs and abilities of the students through a varied approach necessitating activity and self-discipline on the part of the pupil.

In a good learning situation, there are pupil-teacher relationships in which individual conferences and group discussions help each child to clarify his own goals in relation to the total school goals. This, of course, implies curriculum planning to provide for the individual attention and has specific implications for building design. Teachers and students are being given individual work spaces.

Tomorrow's teacher will assume responsibility for that part of the day's program for which she is best qualified, particularly in the upper grades. Teachers and students will likely be moving from one area to another, thus requiring a greater variety of and accessibility to school spaces. Children will be grouped, as the need arises, in smaller or larger groups.

The implication for this is for greater flexibility in our buildings. This will require more than just operable walls between classrooms. It implies a type of area that can be further adapted should new teaching methods give way to even newer ones.

Although only a small amount of materials is now available, the use of programmed materials is gaining momentum. These materials are now available in several areas including reading, arithmetic, and spelling. The use of these materials will accelerate the trend toward individualized instruction.

The future use of audio-visual techniques will de-emphasize group viewing of slides, filmstrips, and movies. Equipment which permits viewing by an individual or a group of such learning aids as filmstrips, microscope slides, transparencies, slide films, and programmed texts is a reality. Simple controls will increase the usability of devices by younger students. High quality screens requiring a minimum of light control are now available.

Once hampered by having to provide as much daylight as possible, architects have been set free to plan for learning through the use of new lighting techniques. Windows may not have been completely eliminated, but they have been reoriented, allowing more vertical teaching space. Without having to worry about the vagaries of daylight, architects have been able to use new designs and new textures. Schools have been turned inward toward the problem at hand.

Since learning is an individual matter and much of the child's work will be highly individualized, he must be encouraged to utilize his total environment for his education. The environment must, therefore, provide for the student as much resource material as possible. For this reason, the learning resource centers (libraries) should be well located and all elementary schools should have central libraries. More than just libraries, they should adapt to centers for tapes, films, recordings, and projection equipment. In some instances, small instructional materials centers should be developed in units of large buildings so that supplies and materials will be more readily available to pupils and teachers.

The aforementioned concepts generate a need for cooperation between staff at all grade levels. Provision must be made in new and old facilities for easy interchange of ideas, materials, and personnel. Daily informal contacts among staff members will be increased.

The foregoing discussion does not imply that good teaching cannot or does not occur within the framework of the graded school and the self-contained classroom. Indeed, the elementary school classroom as we know it has considerable merit, especially in the first three or four years. Within this self-contained classroom, however, the content of the curriculum must be upgraded, individual assignments must replace group exercises, and students must experience continuous progress if learning is to take place. Students must spend more of their time in individual study and in individual conferences with the teacher, as well as in small-group activity. They should spend less of their time in activities involving the entire class. Students in any grade level must have a wide range of materials at their disposal, most of which they can use independently.

Whether we are exploring the non-graded or the graded vertical elementary school organization or the self-contained, departmentalized or team-teaching horizontal approach to organization, all have the same implications for evaluating existing buildings or for considering new buildings. Buildings must not stand in the way of education. They must be flexible--capable of being adapted to newer ways of more effectively educating boys and girls. They must be flexible to the point of permitting one teacher to work with groups varying in size from one student to sixty or ninety students. They must also permit these groups to change in size without confusion and needless waste of instructional time. The buildings must also expedite the personal contacts between teachers of the same grade level as well as teachers from different grade levels.

Secondary Education

Much of what we have been saying about elementary education applies as well to the secondary schools, both the junior high school grades 7-9 and the senior high school grades 10-12. In common practice, secondary education is divided into blocks - e.g., the junior high school and the three-year senior high school. This type of division, however, is strictly arbitrary and is usually determined by the

existing facilities. Available research demonstrates that organizational patterns (6-2-4, 6-3-3, 6-6, 5-3-4, etc.) have no bearing on educational accomplishment -- i.e., from the standpoint of effects on students, no single organizational pattern is superior to any other. When we use the term "high school," therefore, we refer to the total secondary program however it is organized.

A comprehensive high school is the antithesis of the high school which specializes in either college preparation or vocational preparation. The comprehensive high school represents a unique American attempt to attain three major objectives:

1. to provide a general education for <u>all</u> students,
2. to provide elective programs for those who wish or need to use acquired skills immediately upon graduation, and
3. to provide satisfactory programs for those whose vocations will depend upon their subsequent education in a technical school, college, or university.

Differences of opinion as to whether or not such a large undertaking can successfully attain these objectives have not been settled. Meanwhile, most American communities are trying to offer such education to their younger citizens.

In trying to meet these distinct objectives, the modern high school should probably avoid sharp discriminations between the "college-bound" and the "non-college-bound." Rather, the umbrella should be a comprehensive program which provides for <u>all</u> students the opportunity for continuous study in these major subject fields: the language arts, the social studies, mathematics, fine arts, sciences, practical or applied arts, and health and physical education. For a given student, the relative emphasis among these seven fields should be determined on the basis of educational need, vocational need, interest, and present level of performance.

The language arts program places initial emphasis on the development and mastery of essential communication skills -- reading, listening, speaking, and

writing. Many students have developed proficiency in these skills by the time they enter the secondary school, of course, and need no further formal skill instructions as such. They need only expanded opportunities to apply those skills in meaningful situations. The language arts program includes acquisition of these skills. (Who should study foreign languages and which foreign languages should be studied, are matters of intense debate. Currently no "right" answer is available.) The comprehensive language arts program also includes the study of all types of literature, American and foreign, both as a source of information and as a source of enjoyment.

If we want students to learn to enjoy reading literature, of course, we must create learning situations which provide enjoyment for them. Using literature as a source of information, on the other hand, ties the language arts to the social studies.

The social studies can be broadly conceived as a study of the history of peoples (including history in the making) and as such it requires consideration of the interrelatedness of geographic, economic, political, philosophical, and sociological factors in shaping man's course in an uncertain world. The literature, art, and music of a particular people of a given time and place provide necessary information for understanding the historical events being studied. Thus, learning about man's social development requires the services of not only the history teacher but also the specialist in literature, music, and art. In essence, the social studies program provides background knowledge for the student to project himself into the future as an adult citizen.

Mathematics is a skill subject, a tool which people use in solving problems. Most people need only simple computational skills and can be expected to acquire them at an early age. Only a relatively few require competence in the more sophisticated forms of mathematics which find application in the sciences and engineering, <u>but for those few the opportunity for appropriate study must be provided</u>.

The study of science -- the physical sciences, the biological sciences, and the earth sciences -- provides a background for all students to understand some of the social and political problems they will face as adults: community health, conservation, nuclear energy, the race to Mars. Beyond this, a few students require sophistication and specialized knowledge in particular sciences as these relate to vocational goals.

The fine arts afford a necessary opportunity for students to develop competence in aesthetic self-expression. Every student should have the chance to develop whatever performing talents he has, but fine arts misses the mark if limited to marching bands, singing choirs, and stage productions. The development of talent which can be enjoyed individually -- such as painting, sculpting, listening to music -- is increasingly important as man's leisure time steadily grows.

The applied arts include a number of skills which persons can use vocationally -- e.g., clerical and mechanical. Many students need these skills for purely personal reasons -- e.g., typing, furniture repairing, cooking, sewing, appliance repairing. Rigid distinctions should not be made between those who need skills for personal use and those who need them for vocational reasons, nor between boys and girls. The applied arts encompass the traditional labels of home economics, secretarial courses, and industrial arts (including drafting, woodworking, metal working, power mechanics, graphic arts, and electronics). While students should have an opportunity to study as widely and intensively as appropriate to their needs, we should not expect that this program will provide occupational training for a significant number of students. For many, however, this can be considered pre-vocational training.

Health and physical education stresses instruction in the maintenance of personal health (physical and mental) and personal physical fitness. All students need to acquire skills in physical activity which they can enjoy and which,

therefore, can contribute to their physical fitness as adults. A continuous program throughout a student's career is more effective toward this end than one which excludes the student in the upper grades. As in all other fields, opportunity must be provided for both boys and girls to develop their special talents, but interscholastic athletics is certainly not the heart of the physical education program.

We have described the broad areas in which students should have the opportunity to study. Each student's program, however, must be carefully planned and executed with reference to how much of a given subject he studies at a given time. This kind of planning requires a guidance service capable of dealing with the amount of diversity we can expect to find in a typical high school body.

The kind of program we have described requires a considerable amount of purposeful independent study or laboratory work (in the library, the science laboratory, the shops, the practice rooms, the art studio, etc.). It also requires a different allocation of student time to types of activities. There is a tendency to break away from the traditional one-hour class for every subject with thirty students in each class.

As time is used more flexibly, teachers can also be employed more flexibly and efficiently. An analysis of learning activities indicates that there are three types. In one the learner listens, watches, takes notes. Learning may take place through a teacher's lecture and demonstration, films, television, etc. Such activities can take place equally well if the student is alone, in a small group, or in a very large group. Because this type activity is possible in large groups, it is often called large-group instruction. This concept, however, is independent of number.

A second kind of activity is that of discussion, exchange of ideas, and group projects. Successful participation requires a rather small group. Although such activities are frequently attempted with twenty or thirty students, they are most effective with groups of four to twelve.

A third kind of activity is that of independent study, individual study, practice, and research. Such individual work requires concentration. For most such experiences, a feeling of privacy is necessary for maximum effectiveness.

SUMMARY

In planning a building (and, indeed, in evaluating one!) attention must be given to the best use of space. It is necessary, therefore, for optimum learning situations that space be quickly and easily convertible from that necessary for one type of activity to that of another. Such conversion allows for flexible grouping so that the type of activity most suitable for the immediate learning process can be employed. Designing all areas for thirty pupils is no longer defensible.

Finally, the physical environment is vitally linked to the success of the educational program. An unhealthy, depressing, or unsanitary environment is not only harmful to children as persons but also it damages the educational process. An abundance of research supports the contention that learning takes place most efficiently in a physical environment that is aesthetically pleasing, comfortable, healthful, and stimulating. A building, therefore, is more than shelter, even more than a tool; it is an integral part of the educational process.

In this section we have stressed the need for flexibility in programs and facilities. In planning new buildings especially we should recognize that buildings are planned for life expectancies of forty to fifty years. During this period changes may be anticipated in a number of areas of the learning situation: course offerings; type of equipment; teaching methods; teaching materials; nature of the school population; numbers in the school population; and responsibility of the school. It is, therefore, easy to recognize that facilities built forty or fifty years ago -- even though they may still be structurally sound -- are educationally outdated or might be termed educationally unsound.

An indication of educational trends was published in the February issue of the American School Board Journal by Dr. Harold Silverthorn, Bothell, Washington.

	Away From	Toward
1.	Memorization of information	Comprehension and understanding
2.	Accumulation of information	Concept establishment and development
3.	Instruction	Learning
4.	Facts and principles	Values
5.	Tests	Application
6.	Lecture	Self-directed study and learning
7.	Conformity	Creativity
8.	Group instruction	More individual instruction
9.	Cookbook directions	Discovery
10.	Lecture	Laboratory
11.	Subject-matter fragmentation	Integration of material
12.	Imposed discipline	Self-discipline
13.	Scope and sequence	Structure of the subject
14.	All instruction grouped for 30	Large group visual instruction
15.	Infallible authority	Varied sources
16.	Problem solution	Problem identification
17.	Indoctrination and training	Learning as a personal matter
18.	Tradition	New explorations
19.	Education as a finished product	Continuing lifetime learning
20.	Textbook outline and content	Selected content
21.	A common curriculum for all children	Special education
22.	Satelite libraries	General library
23.	Emphasis on text and reference books	A broadly conceived library
24.	A completely one-teacher-dominated classroom	Use of machines--microfilm, reader, programmer, etc.

SUGGESTIONS AND RECOMMENDATIONS

The American society from its beginning has been a great experiment. The attempt to find a fundamentally new way of life for man has depended for its success upon the development of education at all levels suited to the demand of the evolving new society. The American experiment will fail unless its education is adequate - not only to sustain the society but continually to recreate it.

Thus, it is a constant and urgent search for an educational process appropriate to the American democracy. In times of rapid transition, when the inadequacy of old ways becomes apparent and more appropriate new ways are not in sight, fear and frustration increases and people become frantic. A frantic, frustrated person or society tends to become irresponsible as it looks for scapegoats for its inability to find answers.

We are in such a period in American life. New solutions for all problems are needed desperately. Not finding quick easy answers, we fall to abusing one another. Education is caught in this destructive and sometimes vicious process. It is the purpose of this survey to crystallize and analyze at least one manner in which Unified School District No. 353, Wellington, Kansas might solve its school facilities needs. The people residing in this district should become familiar with this need and other problems that will confront the district from time to time. For the welfare of the school children, the people residing in this unified district should approach these problems in an intelligent and patient manner in searching for a sound solution. This will call for a cooperative effort on the part of everyone concerned - the board of education, administration, faculty and residents in the community.

The board of education, Unified School District No. 353, and the community should commence immediately to implement the following plan, or a similar plan to improve their school facilities.

I. Develop a long-range plan and program to provide equal and comparable educational opportunities for all of the children in the district. This program should encompass grades K-12 and compare favorably with programs provided by other school districts of comparable size in the State of Kansas and in the nation.

1. The principles and criteria for developing A Master Plan for School Buildings are listed in this report in the Appendix from page 50 to page 56 inclusive.

II. For elementary purposes, the unified school district should strive to provide four (4) good modern and up-to-date elementary school buildings in the City of Wellington.

1. At present, the district has two (2) very acceptable buildings - Roosevelt and Lincoln. These two buildings should definitely be a part of the four building complex as recommended above.

2. Two new elementary school buildings will need to be incorporated into the Master Plan.

   a. The first should be constructed on the west side of the city as soon as possible to replace the outdated McKinley building. The cost of this building should be a part of the next bond issue. The building should consist of 18 regular classrooms, 2 kindergarten rooms, a multi-purpose room, music room, lunch room facilities, a central library, and other related areas as deemed necessary by the board, administration, and staff.

   b. The second new elementary school building should be located in the east part of the city to eventually replace the Madison building. The date of construction for this building should be a part of the Master Plan, but not a part of the next bond issue.

3. The Jefferson elementary school should eventually be phased out.

   a. The date for phasing out the Jefferson school could coincide with the opening of the new school building which will replace the McKinley building.

   b. The children from the Jefferson school could be re-assigned by the board and administration to the building deemed most appropriate.

4. The Washington elementary school building could be utilized primarily for special education, federal programs and as otherwise needed.

a. The Washington building will need to be renovated as necessary to comply with the above recommendation.

5. Eventually Roosevelt and Lincoln elementary school buildings may need to be enlarged to accommodate at least two sections of each grade and one full time kindergarten room. Both buildings should have a central library and provisions for a school lunch program.

   a. The district should not be tempted to create central libraries or other special educational service areas from entirely inadequate spaces.

   b. Both Roosevelt and Lincoln schools have extremely small school sites. If occasion ever arises to expand these sites, the board should immediately take advantage of such an opportunity.

III. Junior high school building improvements should be made as follows:

1. Provide an adequate band room of at least 2000 square feet of floor space, with a minimum ceiling height of 14 feet, and meeting all other state and national standards.

   a. This would eliminate sending several junior high school groups to the senior high school building, when in fact the senior high school needs this space for their own purpose.

2. Improve the artificial lighting. To really do a good job will probably necessitate relighting most of the classrooms and corridors.

3. Install acoustical ceilings in all of the classrooms which do not have them.

4. Since six of the present classrooms are only 21' x 24' and two more 24' x 25', some attempt should be made to remove some of the partitions and enlarge these rooms to a standard size of at least 800 to 850 square feet of floor space per room.

5. Mathematics rooms should be provided with more chalkboard space and better equipment.

6. The science rooms are adequate in size but the junior high school needs a better science program and better equipment with which to teach modern day science classes properly.

7. Need better electronic equipment for the foreign language laboratory.

8. Need to remodel the northeast corner on the first floor for a teachers' room.

9. The library needs to be relighted.

10. Should have better equipment for the arts and crafts room.

11. The entire shop area needs to be completely renovated to be more nearly adaptable for a junior high school program.

    a. Perhaps this should commence by developing a more functional program and adopting the shop spaces to comply with the subjects offered and taught.

12. Eliminate some of the undesirable areas in the basement which are currently being utilized for class purposes.

    a. This is being suggested since some of the spaces, such as the wrestling room, do not comply with present state codes or fire regulations.

    b. Some of the basement rooms are rather inaccessible, have poor ventilation, and do not meet accreditation standards.

13. The two cottages located on the junior high school site should not be utilized for classroom use for either junior high or senior high school students.

    a. These cottages should be removed from the site as soon as possible. Until they are actually removed from the grounds, they should serve only as a storage space.

IV. The senior high school building needs to be enlarged since the building has a capacity of only 500 students and the present enrollment is almost 600. Thus, to adequately plan for the future, the board and community should plan for a capacity of 700 to 750 students. This would necessitate an addition to include at least:

1. Facilities for a school lunch program to accommodate both the junior and senior high school students.

    a. Just as soon as secondary school lunch facilities are available, the senior high school should change their schedule to provide for a closed noon hour.

2. Two English classrooms.

3. One classroom for speech and drama.

4. An additional mathematics classroom.

5. One social studies classroom.

6. A fully equipped foreign language laboratory.

7. The original high school plans called for converting the library into a science room. This should be done and would provide an additional science room.

8. As the library is being converted into a classroom for science, it will be necessary to construct a new library.

   a. The new high school library should have

      (1) A reading room to accommodate 70 to 80 students, allowing 30 to 35 square feet of floor space per student.

      (2) An audio-visual materials center.

      (3) A listening and viewing area.

      (4) Stack area.

      (5) Conference rooms.

      (6) Classroom area.

      (7) Work and office area.

      (8) A small area to serve as a professional library for the staff.

   b. The library area should have natural and artificial light, heat, air conditioning, and ventilation in sufficient degrees to meet the most recent standards.

   c. The library floor should be carpeted and the ceiling acoustically treated for good sound control.

9. A new instrumental music room with at least 3000 square feet of floor space should be provided.

   a. The present music room should be properly remodeled for vocal music instruction.

10. The shop area should be enlarged to accommodate teaching the following or other related subjects.

   a. Electronics shop.

   b. Power machines shop.

   c. Graphic arts.

   d. Others as deemed necessary by the school authorities.

11. Two shop classrooms should be provided with proper equipment for conducting any shop class offered in the curriculum.

12. A wrestling gymnasium adequate in size to accommodate the usual class size.

V. The use of the two cottages located on the junior high school site should be discontinued as soon as new facilities are available.

1. It appears the cottages are entirely inadequate except for storage space. (This was also suggested under the junior high school recommendations.)

VI. Proper facilities should be provided and a secondary school curriculum developed which would completely eliminate transferring secondary school students from one building to another.

VII. The next school district bond proposal should include sufficient funds for at least the following:

1. A new elementary school located in the west part of the city on an adequate site to replace the McKinley building.

2. A plan for upgrading the other elementary school buildings as needed.

3. A proposal to remodel the junior high school building in keeping with the recommendations in this report.

4. An adequate addition to the senior high school building to provide for a student capacity of 700 to 750 as recommended in this report.

a. The high school proposal should also provide for necessary changes in the present building.

b. The high school addition should provide for school lunch facilities to accommodate both the junior and senior high school students.

VIII. As item Number VII above is implemented, the board should consider transporting all the seventh and eighth grade students from Mayfield and Rome to the junior high school in Wellington.

1. This is really the only way the district can assure these students equal and comparable educational opportunities.

IX. For the present time, and until the patrons living in the original Mayfield and Rome districts vote otherwise, it would appear logical to continue school for grades 1-6 in both the Mayfield and Rome buildings.

CONCLUSION

The good school of today and tomorrow must provide improved educational opportunities for an ever increasing number of boys and girls. The good school of the past is not adequate for the present and future. Innovations must be developed, teaching methods must be improved, and school construction must be planned for future generations to be able to cope with the rapidly expanding field of knowledge. The superior mind must be challenged. Average ability must be more fully developed. The below average intellectually and the physically and mentally handicapped must be provided the best possible learning situation. The need for further diversification of the curriculum arises from this wide range and variety of abilities and interests.

Mark Hopkins did a good job of teaching in his day when he sat on one end of a log and the farm boy sat on the other, but present and future conditions demand a more adequate environment.

The maintenance of an effective school system is one of the great social concerns of our time. Yet, a too common view is that all we need is to "patch up" our system, give the schools a little more money and maintain the "status quo." Many people do not seem to realize that the public schools, which are the foundation of our democratic way of life, must be strengthened if we are to perpetuate and improve our "way of life." It appears that we may be in a long drawn out conflict with an ideology quite unlike our own, and that many current problems will be left for future generations to solve. Our leaders of tomorrow are in the schools of today. Therefore, it is our responsibility to train our children to live and work in tomorrow's complex world.

APPENDIX

PRINCIPLES AND CRITERIA FOR DEVELOPING A MASTER PLAN FOR SCHOOL BUILDINGS

The purpose of this directive is to set forth the minimum requirements of the Department of Public Instruction with respect to the content of a long range master plan for school building construction, hereinafter referred to as The Master Plan for School Buildings, and of the studies and analyses to be made in its preparation.

A Master Plan for School Buildings is a plan for providing the school facilities to be needed by the administrative unit for at least the next ten years. It should be predicated upon (1) decisions as to the type of educational program to be provided now and in the future, (2) a forecast of the future numbers and distribution of children, youths and adults for whom the educational program is to be provided, and (3) detailed knowledge of existing facilities - their location, capacity, degree of present use, condition and estimated future period of usefulness. It should indicate where new facilities should be located and approximately when they should be provided in order to serve most conveniently and safely the persons using them. It should include a plan for financing the new facilities.

Schools are an important and integral part of a community. Hence, the Master Plan for School Buildings should be carefully coordinated with the projected pattern of future community development within the administrative area and with plans for the provisions of other physical facilities in the community. The future pattern of residential, commercial, industrial and other land uses (and the consequent distribution of population), the location of existing and proposed streets and highways, water and sewer mains, recreation facilities, etc., have very great relevance to where and when new school facilities will be needed. Conversely, the locations of existing and proposed new school facilitis greatly influence the desirable future pattern of land uses and the proper location of other physical facilities.

Ideally, therefore, the Master Plan for School Buildings should be prepared as an integral part of a Comprehensive Plan for future growth and development of the community or communities composing the administrative area. A Comprehensive Plan for community development has three major elements: (1) a plan of future land use indicating the areas into which residential, commercial, industrial and other land uses should be directed in the future; (2) a major thoroughfare, or transportation plan indicating the location of existing and desirable future streets, highways and other transportation facilities, if any; and (3) a plan of public facilities including schools, recreation facilities, fire and police stations, other public buildings and facilities, and water, sewer and other utility facilities.

Planning for future community growth and development, and for all of the physical facilities required to adequately service that growth is the responsibility of municipal and county planning commissions. These agencies will have done, or can do, many of the studies and projections required herein for the Master Plan for School Buildings, and in many instances will have made specific recommendations with respect to future school needs as part of their comprehensive community planning work. Moreover, these planning agencies are eligible to receive federal funds to partially cover the cost of such studies and projections

and for preparing a Master Plan for School Buildings as part of the Comprehensive Plan for community development. Where there is no municipal or county planning commission the administrative unit itself, in order to develop an adequate Master Plan for School Buildings, will have to make many of the analyses and projections of population growth, land use, street and highway locations, etc., that are normally part of a Comprehensive Plan.

It is also pertinent to note that compliance with the Department of Public Instruction's requirement for review and comment on proposed school sites by the local municipal and county planning agencies, where these exist, will be greatly facilitated if there are cooperative relations between these and the administrative unit during the preparation of the Master Plan for School Buildings.

Municipal and county planning agencies are recommending agencies only. Should an administrative unit choose to engage a municipal or county planning agency to prepare the Master Plan for School Buildings, it would not be bound to accept the planning agency's recommendations if it should disagree with those recommendations.

Planning agencies also are responsible for making recommendations to their respective governmental bodies concerning measures for implementing the Comprehensive Plan. Among such measures are municipal and county zoning and subdivision regulations for guiding development into the pattern recommended by the Comprehensive Plan. The enactment and administration of zoning and subdivision regulations establishes not only the pattern of population distribution but also approximate ceilings on the number of families which may ultimately be located in each zoning district or each approved subdivision. The effect of these municipal and county activities on potential school load is obvious.

Another important measure for implementing the Comprehensive Plan is a capital improvements program covering all capital improvement projects proposed during the next five or six years by the municipal or county government, the school administrative unit, and other governmental agencies. The capital improvements program balances the need for specific projects with the revenues available to pay for them and prevents conflicts in the location of scheduling of projects by various agencies. The capital improvements program balances the need for specific projects with the revenues available to pay for them and prevents conflicts in the location or scheduling of projects by various agencies.

It is very much in the interest of school administrative units to promote and support effective implementation of the Comprehensive Plan. If in the absence of effective implementation, development should occur in a manner substantially different from that proposed in the Comprehensive Plan the results could be very injurious to the Master Plan for School Buildings. The sizes and locations of school facilities proposed in the Master Plan for School Buildings might well be illogical in terms of the pattern of community growth that actually develops. Effective zoning, subdivision regulation, capital improvements programming and other implementation measures are essential to achieving the Comprehensive Plan. Achievement of the pattern of future community growth recommended in the Comprehensive Plan, in turn, will insure that school facilities established in accordance with that pattern will efficiently and economically meet the school needs of the community.

Because of human inability to foresee the future with complete accuracy, no plan - no matter how carefully prepared - will be perfect. With the passage of time, errors in basic assumptions, inaccuracies in forecasts of population growth trends and various other factors, and unforeseen events materially affecting the plan will become manifest. It is essential, therefore, that the plan be reappraised periodically (every 2 - 3 years) and adjusted to the course of events as they unfold in order to maintain it as a valid guide to future action.

Following is an outline setting forth the Department's minimum requirements with respect to the content of the Master Plan for School Buildings. These requirements come under the four general headings:

I. A general statement on the character of the administrative unit and the nature and objectives of its educational program.

II. Studies of past community growth in the administrative unit, and projection of future community growth trends.

III. Determination of the number, size and type of new school facilities needed during the next ten years, where these should be located, and approximately when they will be needed.

IV. A plan for financing proposed new school facilities.

In preparing the Master Plan for School Buildings, and in any communication in reference to it, its full title, "Master Plan for School Buildings," should be used in order to avoid confusion with the municipal or county Comprehensive Plan for community development or with any of the latter's various other elements.

I. The Master Plan for School Buildings should begin with a general statement of the character of the administrative unit and the nature and objectives of its educational program. This statement should include the following:

A. A brief description of the general character and physical setting of the administrative unit, including:

- Regional relationships, geographic features, topography, and other basic physical facts.

- Historical and cultural background; number of residents, local traditions and aspirations, community structure, recreational and other social opportunities.

- A general appraisal of the economy; number and kinds of industries and businesses, number of employees, kinds of occupations, income levels, past and probable future trends in economic conditions.

B. A brief description of the existing school system (or systems) proposed to be included in the administrative unit, including:

- A map showing the district or districts to be included.

- The total number and grade levels of pupils in the unit at present.

- A map showing the locations of existing schools (public and private) by size and type, and the attendance areas served by each.

- The age and general condition of each existing public school.

C. A description of the present educational program or programs and, for the administrative units' proposed educational program, a statement of long-range policy objectives regarding:

- School organization (6-3-3, 6-6, 6-2-4, etc.)

- Curriculum offerings.

- Minimum and maximum size of schools and classes (elementary and secondary).

- Maximum walking distance and transportation time (elementary and secondary).

- Provisions for handicapped and gifted children.

- Provisions for health, guidance, psychological and social services.

- Co-curricular activities.

- Community activities.

II. The second step in preparing the Master Plan for School Buildings should be careful studies of past community growth in the administrative unit, and projection of future growth trends, as follows:

A. An analyses of population trends over the past 30 years or more (by decade) and a forecast of future population trends for the next 10 years at least, and preferably 20 years. This study should include analysis and forecast of:

- Overall trends in population growth as related to state and regional growth trends and the potential for housing development in the administrative unit's area.

- Trends in population characteristics such as birth rates and age composition (including the number of pre-school and school age children).

- Maps showing trends in the distribution of population within the area of the administrative unit.

- Trends in school enrollments (public and non-public) for at least the past ten years and for ten years in the future.

- Forecast trends in public school enrollments for at least the next ten years based on the forecasts of overall population and total school enrollments and the grade to grade survival ratio.

B. A survey and analysis of the existing pattern of land uses in the administrative unit, past trends in land use, and a projection of probable future changes in the land use pattern. This study should give particular attention to:

- Preparation of maps showing the location of agricultural, residential, commercial, industrial, recreational and other land uses; present and probable future.

- The existing stock of housing; number of dwellings, types, densities per acre, age and condition.

- Trends in residential building during the last ten years.

- Proposed residential developments and undeveloped land suitable for residential use.

- Zoning, subdivision and other controls for guiding land development.

C. A study of highways and major streets and of other transportation facilities in the administrative unit. Maps and textual materials should be prepared indicating:

- The locations of present and proposed highways and major streets by type.

- Present and projected future traffic volumes on existing and proposed highways and major streets.

- The locations and general character of railroads, airports and other transportation facilities, if any.

D. A survey of existing and proposed utilities and public services. Maps should be prepared showing the locations of:

- Central water and sewer facilities, existing and proposed.

- Electric and gas service lines.

- High pressure pipe lines and high tension electric lines.

III. The third step in preparing the Master Plan for School Buildings is to determine the number, size and type of new school facilities that will be needed during the next ten years, where these should be located to serve most conveniently and safely the persons who will be using them, and approximately when they will be needed.

A. This determination will depend partly on a critical appraisal of existing buildings and sites with respect to:

- The general condition of buildings and the adequacy or obsolescence of buildings and sites with respect to safety, sanitation and other standards.

- The adequacy of existing buildings and sites in terms of their capacity to accommodate projected enrollments and their adaptability to instructional objectives.

- The feasibility of expanding existing facilities and of bringing obsolete facilities up to minimum adequate standards.

- The accessibility of each school facility in relation to convenience and safety from all parts of the attendance area.

B. Future school building needs should be determined on the basis of the above evaluation of present school facilities, the projections of future community growth patterns and distribution of population, and the projection of public school enrollments. Maps, charts, and textual materials should be prepared indicating:

- Existing school facilities to be retained or expanded (elementary and secondary), their optimum capacities and attendance areas.

- Existing school facilities to be abandoned (elementary and secondary).

- New school facilities to be established (elementary and secondary), their proposed capacities and attendance areas.

- The anticipated enrollment at each school facility at five year intervals or less for the next ten years.

C. Decisions with respect to the locations for new school facilities should be made with due consideration of the Department of Public Instruction's Principles and Criteria for Selection and Development of School Sites, currently effective.

D. A priority schedule should be prepared for new facilities and proposed expansions of existing facilities to be constructed in the next five years.

IV. A Master Plan for School Buildings will be no better than the plan by which it is to be financed. The fourth step in its preparation, therefore, is to indicate how the proposed school facilities are to be financed.

A. This requires, first, realistic appraisals of the administrative unit's financial resources and obligations, including:

- Trends in the market and assessed valuation of real property.

- Trends in tax rates for both school and county and municipal purposes, the percentage of taxes collected and the amount of delinquent taxes.

- Trends in total school receipts by source and total expenditures of the school system.

- Trends in net bonded indebtedness and floating indebtedness by both electors and school boards.

- Trends in unused borrowing capacity.

- Trends in rental obligations to authorities.

- Trends in rental obligations to authorities.

- Pay-out schedules of all present bonded indebtedness.

B. Second, the overall costs of the school construction program and the cost of operating the future school system must be carefully estimated. Estimates should be prepared for:

- The cost of each new school facility or expansion or major renovation of existing facilities proposed in the next ten years.

- The overall cost of the school construction program by year for the next five years and for the five year period beyond that based on the priority schedule which specifies when each new facility will be needed.

- The cost of operating and staffing the entire school system by year for the next five years.

C. Third, the future financial obligations of the administrative unit must be projected including:

- The proposed method or methods of financing the construction of new school facilities.

- Projected pay-out schedules of bonded indebtedness.

- Projected tax rates to meet financial requirements on schedule.

GWR:fea
November, 1966.